FIGURE 1

M | Betaine | [MMNO], mM 2.0 1.0 0.5 0.4 0.2 0.1 0.05 | no caosolvent | no caosolvent | no DNA | M
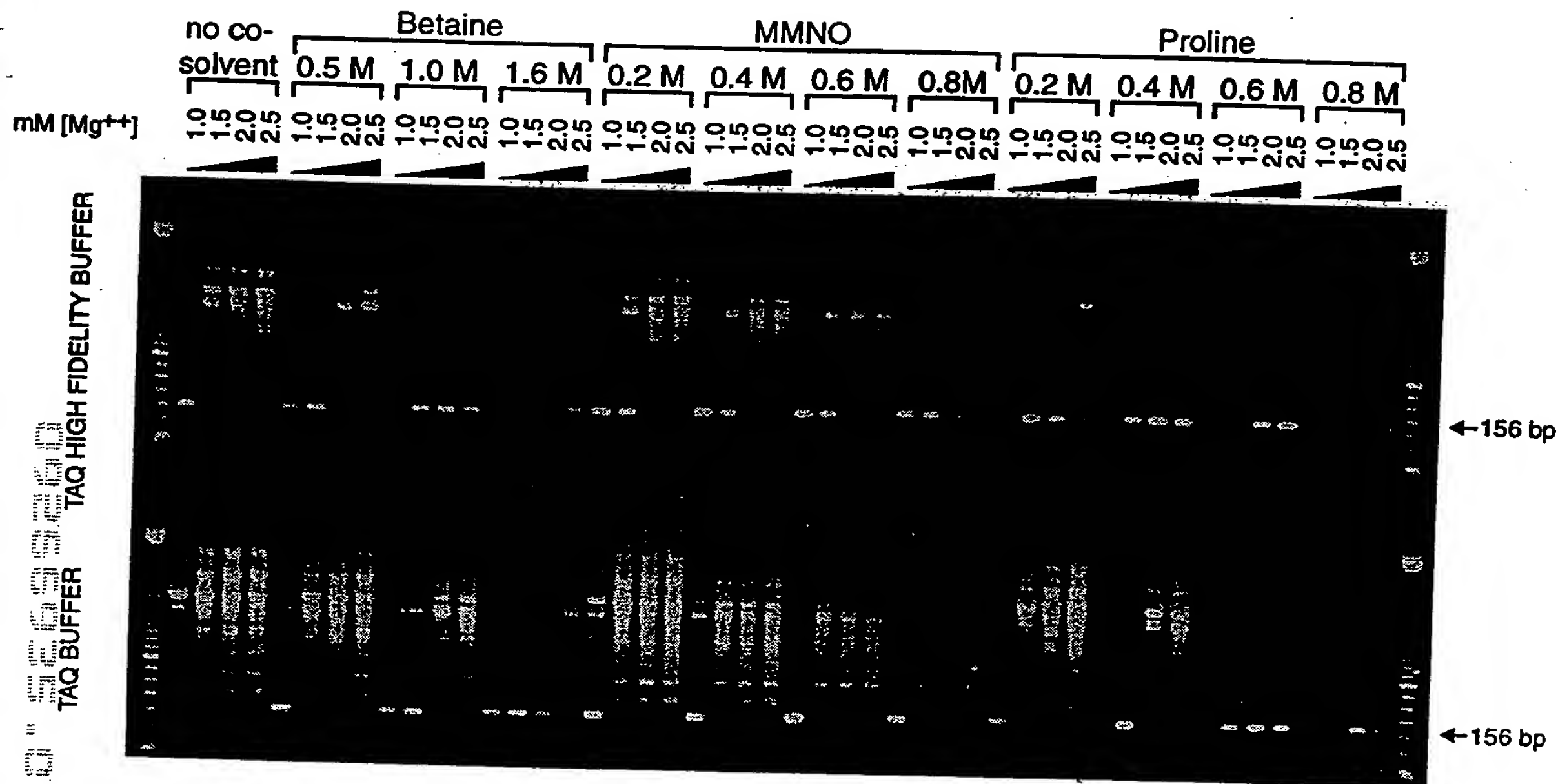
FIGURE 2

FIGURE 3

Amplification of p53 exon 10

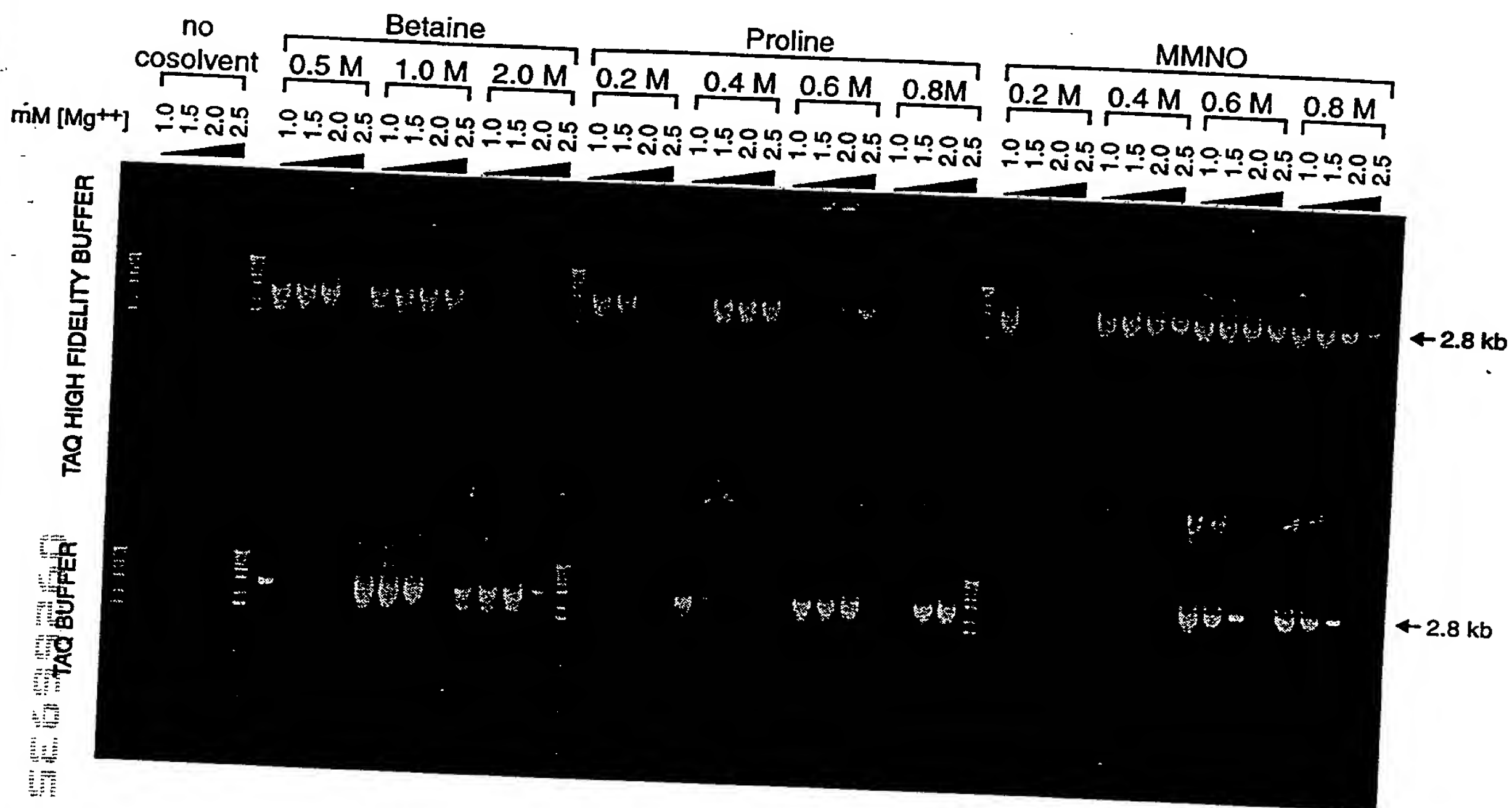FIGURE 4

Amplification of *Dra* DNA pol I

| no cosolvent | Betaine | Proline | MMNO |

mM [Mg++]

no cosolvent: 1.0 1.5 2.0 2.5

Betaine: 0.5 M 1.0 M 2.0 M

Proline: 0.2 M 0.4 M 0.6 M 0.8M

MMNO: 0.2 M 0.4 M 0.6 M 0.8 M

(1.0 1.5 2.0 2.5 for each)

TAQ HIGH FIDELITY BUFFER

TAQ BUFFER

← 2.8 kb

← 2.8 kb

FIGURE 5

Amplification of p53 exon 10:
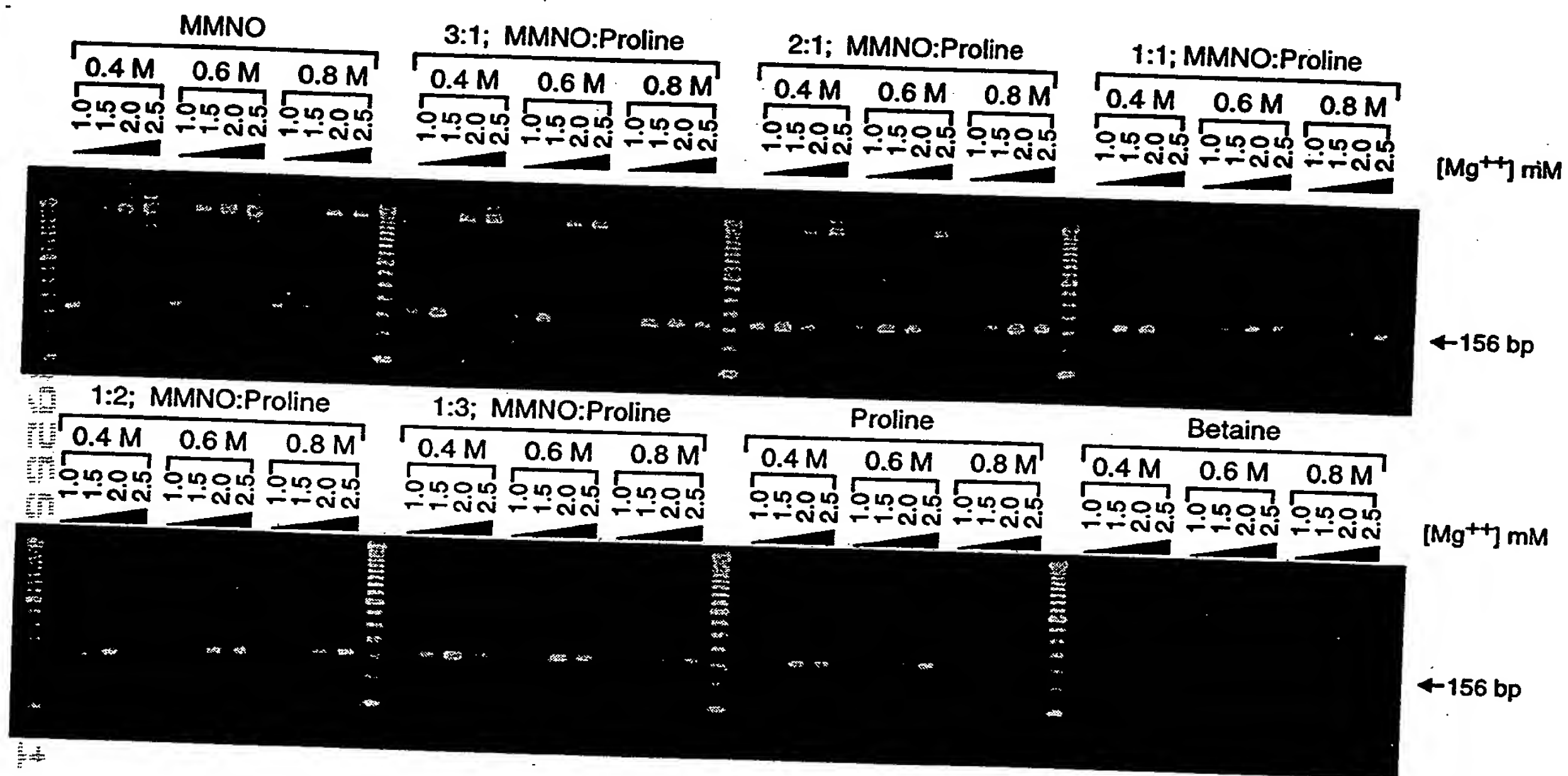## Effect of Cosolvent Mixtures

FIGURE 6

Amplification of *Dra* DNA pol I:
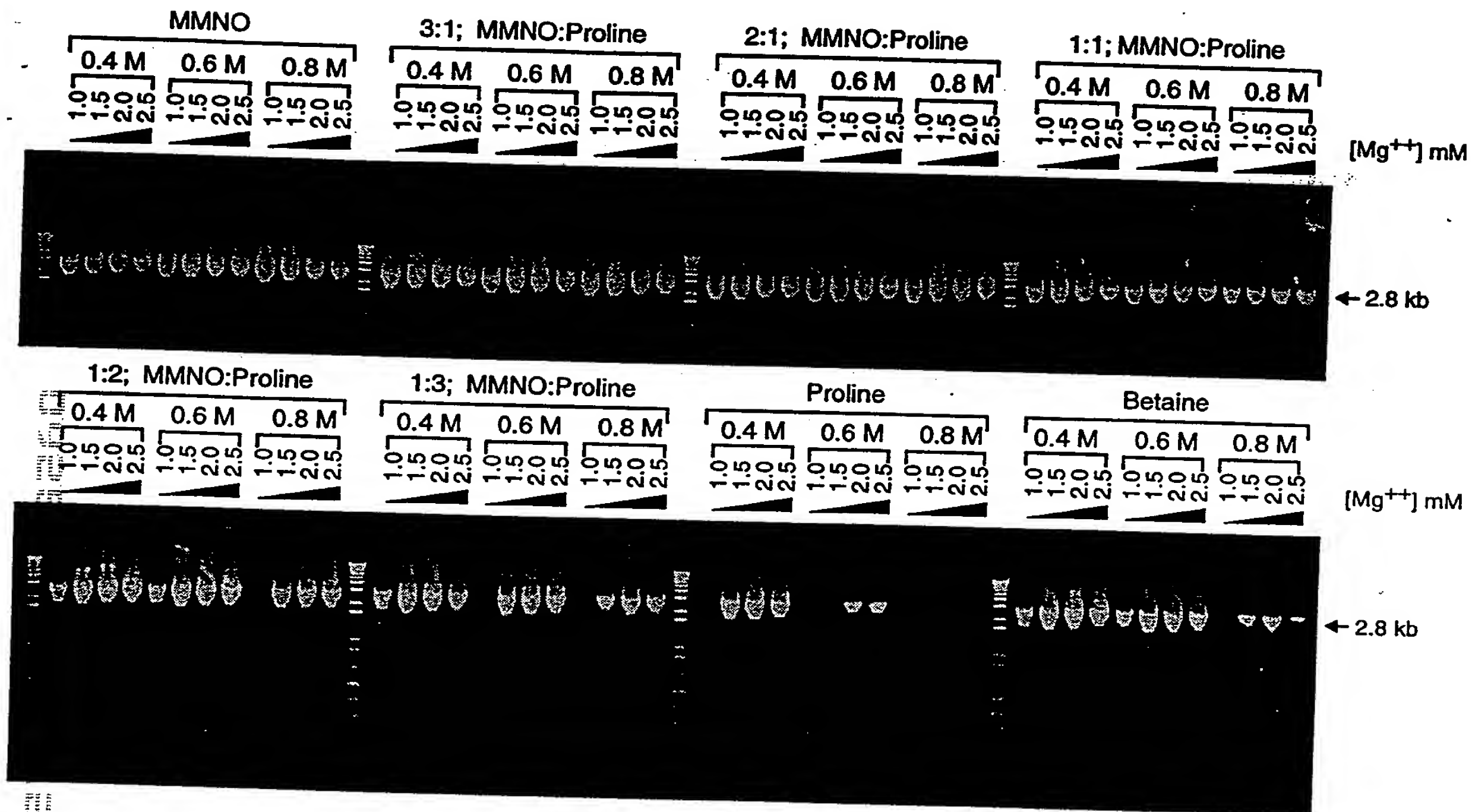## Effect of Cosolvent Mixtures

FIGURE 7

Amplification of P32D9 Locus
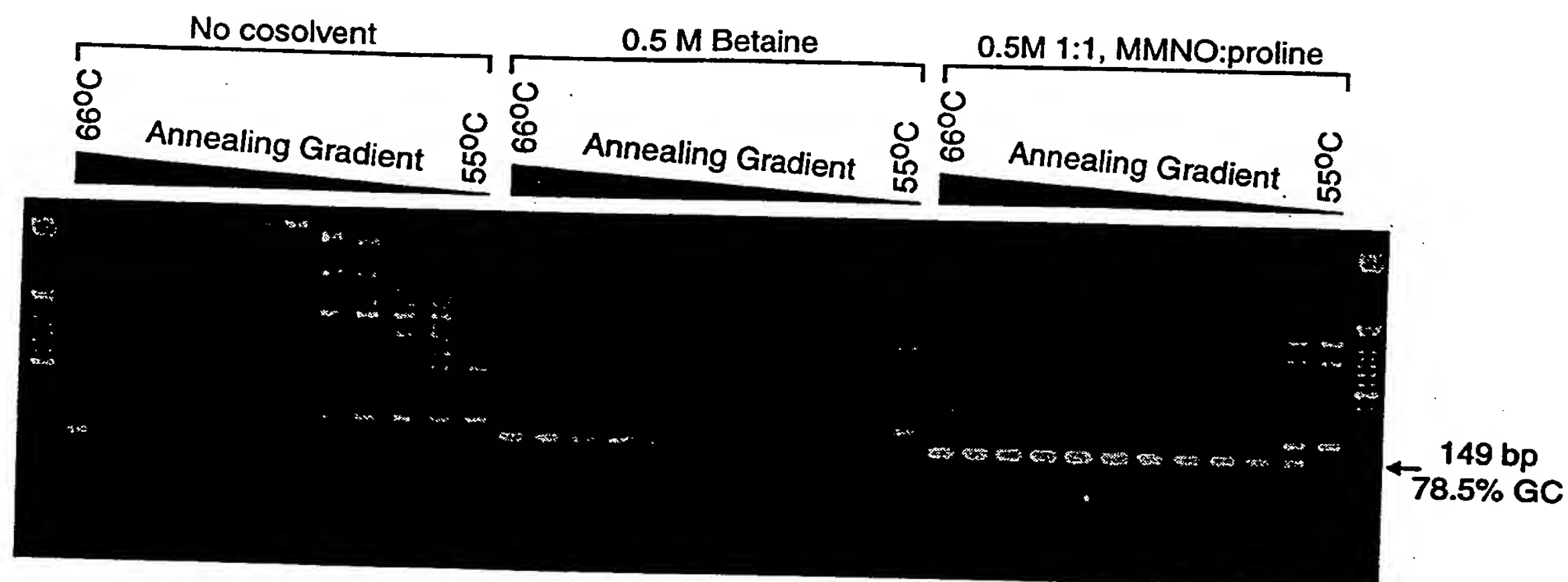## Effect of PCR Cosolvent on Annealing Optima

FIGURÉ 8

Comparison of MMNO:Proline Mixture and Betaine
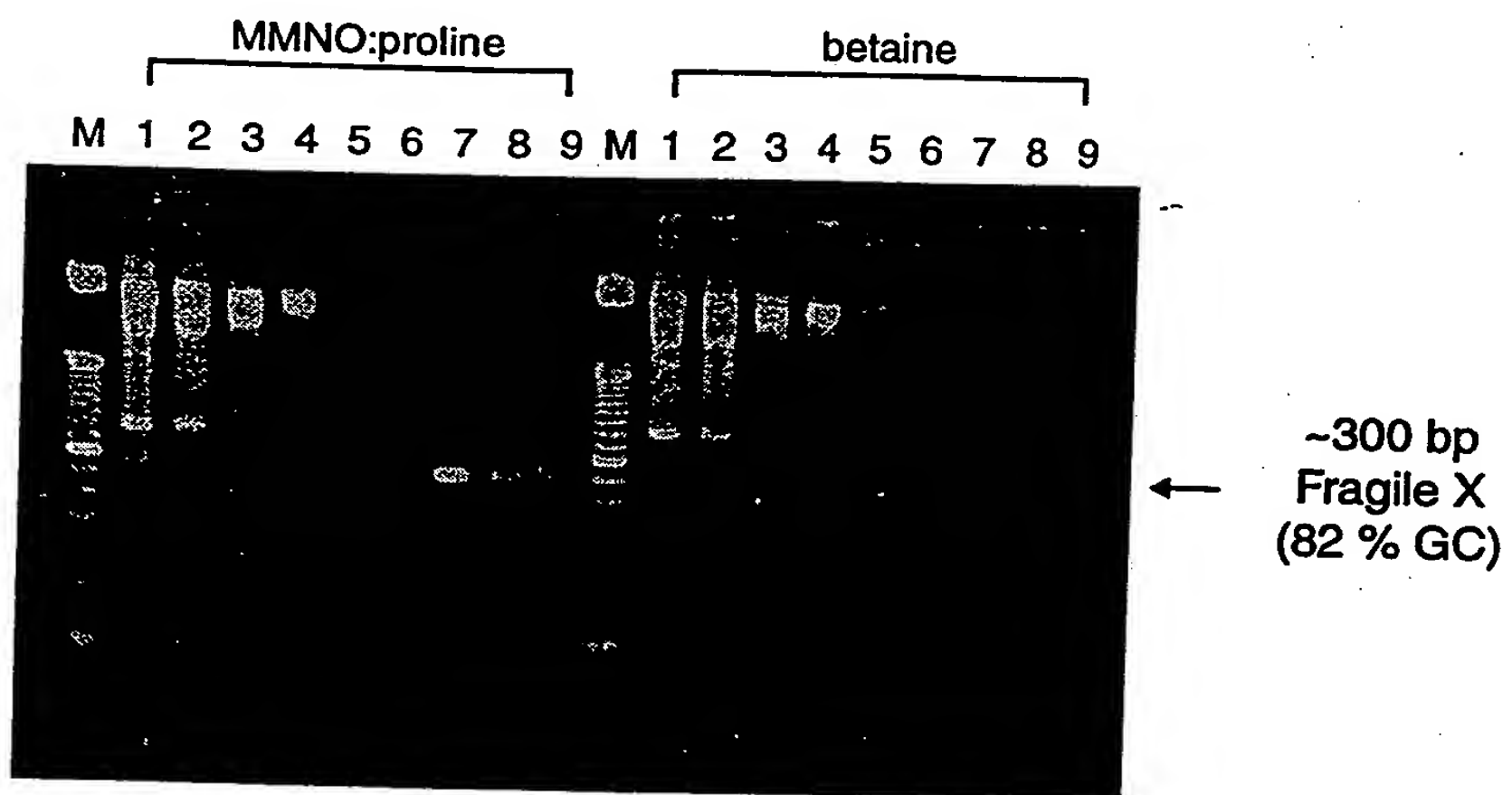for Amplification of Fragile X locus from K562 Genomic DNA

~300 bp
Fragile X
(82 % GC)

FIGURE 9

MMNO:Proline Mixture Facilitates Amplification
of Long GC-Rich DNA Fragments

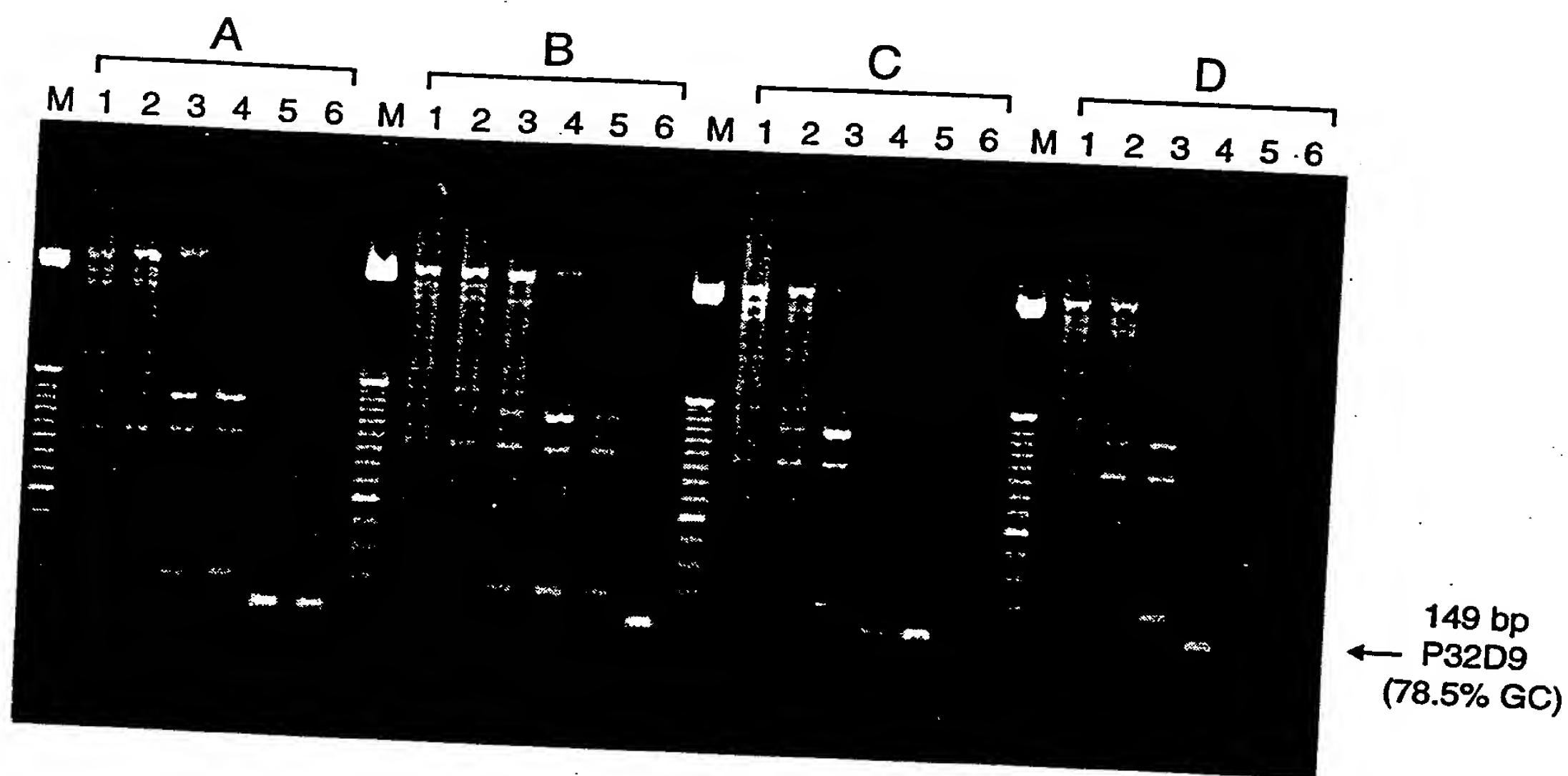

7771 bp
Ad-2 virus →
(61.6% GC)

9750 bp
← Ad-2 virus
(61% GC)
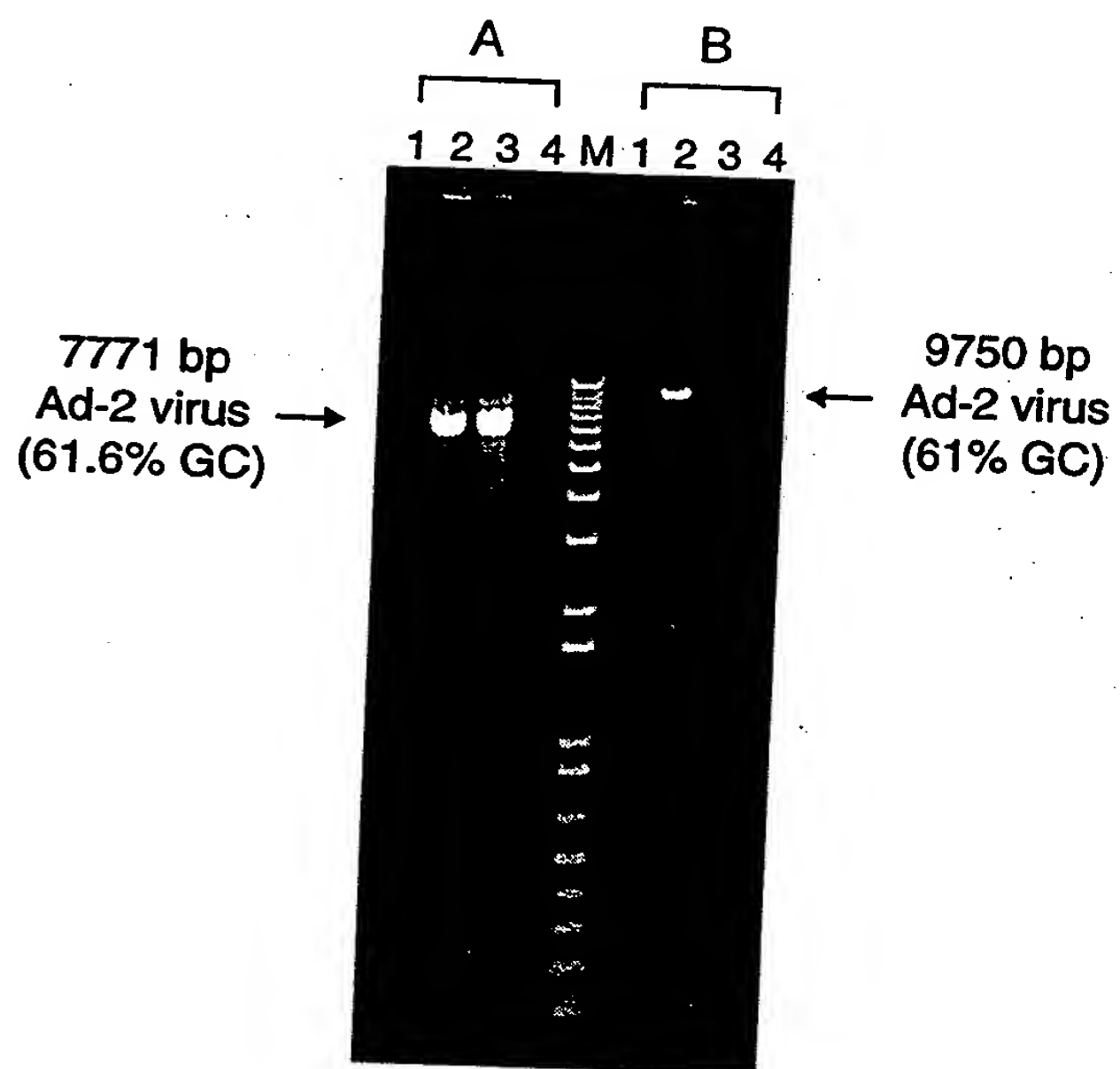
FIGURE 10

Comparison ⬤ Compensatory Solutes for E⬤anced Amplifcation of GC-Rich DNA

149 bp
← P32D9
(78.5% GC)

FIGURE 11.
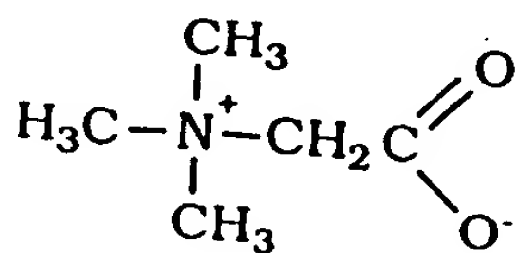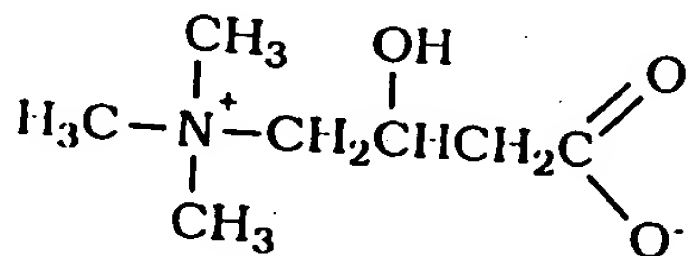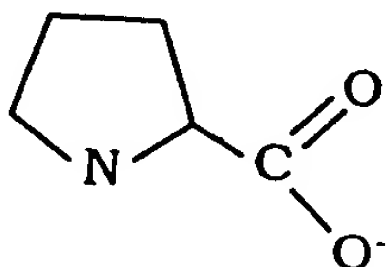
149 bp
← P32D9
(78.5% GC)
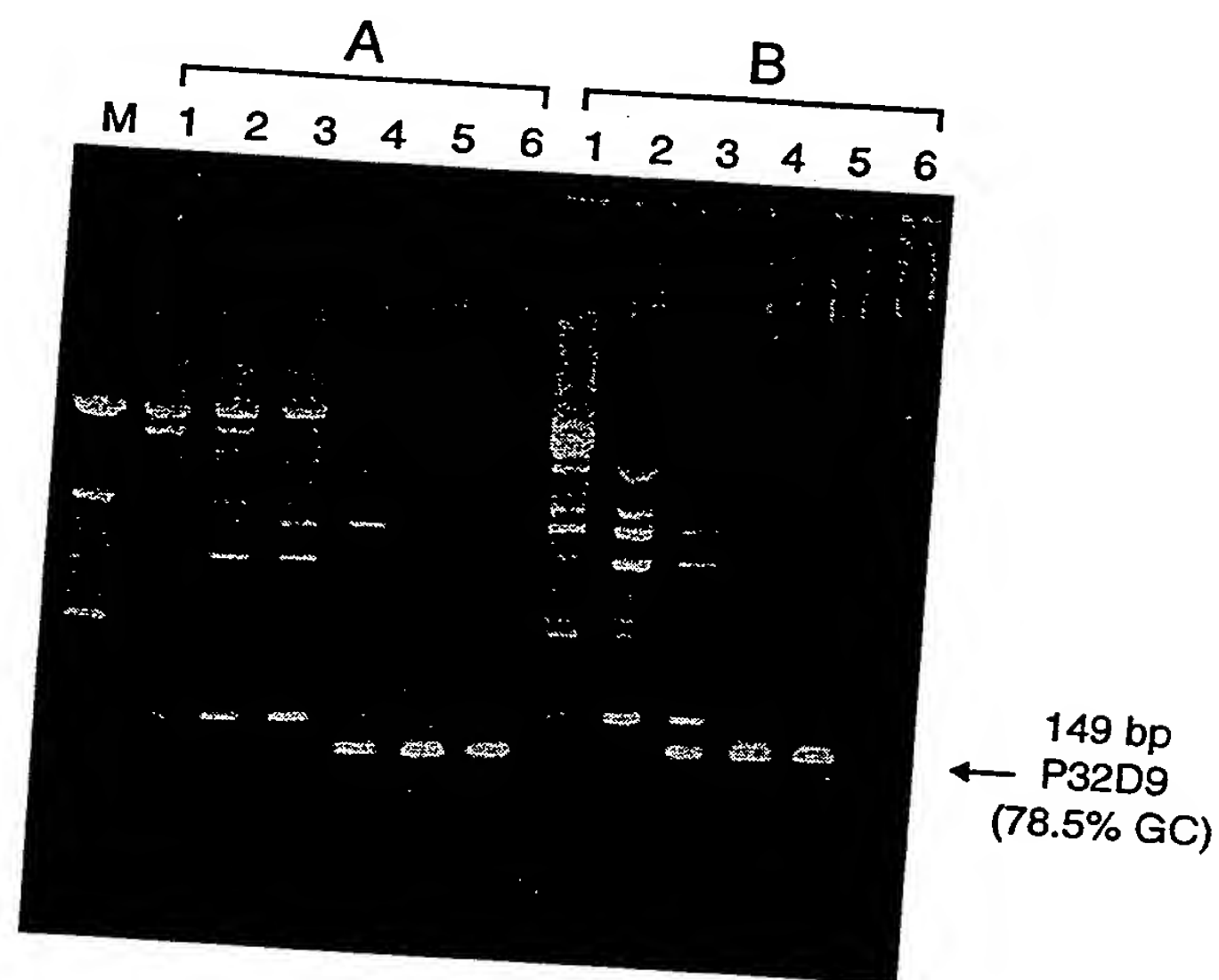
FIGURE 12
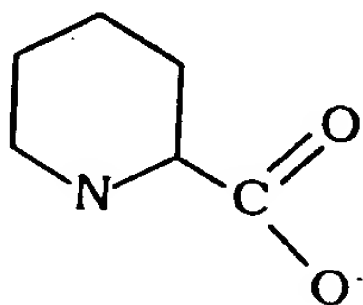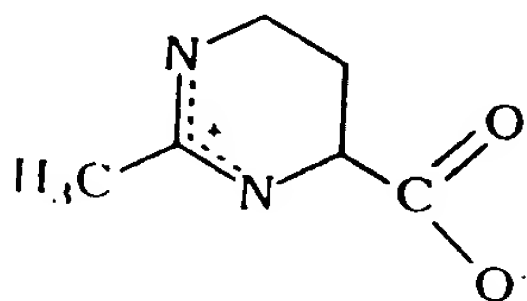
Betaine monohydrate ([Carboxymethyl]trimethylammonium)
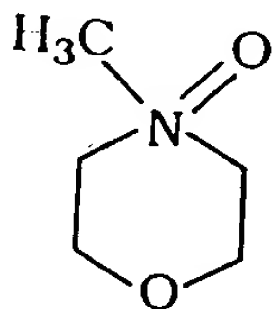
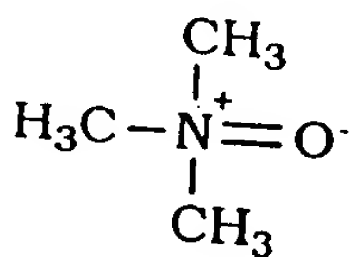carnitine (β-Hydroxy-γ-[trimethylammonio]buterate)

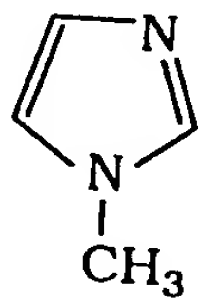proline

pipecolic acid (2-Piperidinecarboxylic acid)

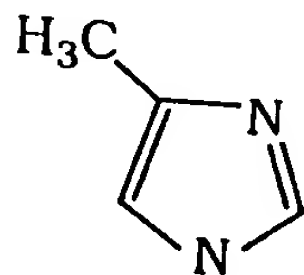ectoine (THP[B]; [S]-2-Methyl-1,4,5,6-tetrahydro-pyrimidine-4-carboxylic acid)

MMNO (4-methylmorpholine-4-oxide)

TMANO (trimethylamine N-oxide)

1-methylimidizole

4(5)-methylimidizole

Figure 13